

1 I claim:

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3 1. A single-shot rifle having a lever-actuated, falling block action, the rifle comprising:

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5 a barrel having opposing ends;

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7 a receiver mounted on one end of the barrel, the receiver having a top surface and a bottom surface,
8 a forward face which joins the barrel and a rearward face, the receiver having a radiused breechblock
9 mortise formed in the rearward face to extend from the top surface to the bottom surface thereof, the
10 receiver also having a horizontally extending cartridge chamber formed therein, the cartridge chamber
11 terminating inwardly in a ring shaped opening sized to receive a cartridge;

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13 a single piece stock having a suitably shaped opening for receiving the receiver and barrel;

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15 a lever-actuated, falling block action, the action including a radiused breechblock movable within the
16 radiused breechblock mortise formed within the receiver, a firing pin alignable with a cartridge
17 located in the cartridge chamber and a hammer for striking the firing pin to fire the cartridge, the
18 breechblock being movable upwardly to cover the cartridge chamber during firing and being movable
19 downwardly to expose the chamber for loading and unloading.

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21 2. The rifle of claim 1, wherein the receiver has an internally threaded bore, the threaded bore
22 comprising a barrel stub hole for receiving a mating externally threaded portion of a barrel end, and
23 wherein the ring shaped opening in the receiver is machined within the receiver at a point at which
24 the barrel stub hole meets the breechblock mortise.

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26 3. The rifle of claim 2, wherein the radiused breechblock and radiused breechblock mortise form a
27 radiused sliding contact surface as the action is moved upwardly and downwardly within the receiver.

1 4. The rifle of claim 1, wherein the radiused sliding contact surface between the breechblock and the
2 breechblock mortise forms an angle greater than perpendicular to a horizontal axis drawn along the
3 rifle chamber.

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5 5. The rifle of claim 4, wherein the radiused sliding contact surface between the breechblock and the
6 breechblock mortise is machined at an angle of approximately 95 degrees with respect to the
7 horizontal axis of the rifle chamber.

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9 6. The rifle of claim 1, wherein the receiver includes a pair of oppositely arranged, downwardly
10 projecting surfaces, each of which comprises a pivot point for the rifle lever, and wherein the
11 downwardly projecting surfaces include adjacent fillet regions which add to the strength of the
12 projections by adding mass to the projecting regions.

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14 7. The rifle of claim 6, wherein the breechblock is raised and lowered in the breechblock mortise by
15 movement of the rifle lever, the lever being pinned to the receiver at the pivot points of the
16 downwardly projecting surfaces of the receiver and being connected to the breechblock by means of
17 a connecting link.

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19 8. The rifle of claim 7, wherein a lever catch is located on a rear surface of the receiver and includes
20 a transverse catch spur which is engaged by at least one notch provided on the operating lever,
21 seating of the transverse catch spur within the operating lever notch defining a stopping point and
22 closed position for the operating lever.

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24 9. The rifle of claim 8, wherein the length of the catch spur and the shape of the operating lever
25 notch are selected to regulate the breaking force of the operating lever during and opening and
26 closing cycle of the rifle action.

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28 10. The rifle of claim 9, wherein the hammer is pivotally pinned in a region machined in a lower front
29 portion of the breechblock and moves upwardly and downwardly with the breechblock.

1 11. The rifle of claim 10, wherein the hammer is biased by a mainspring received in a mainspring
2 housing provided in a rear portion of the receiver and wherein the biasing force of the mainspring is
3 transmitted to the hammer by means of a hammer strut which straddles the safety lever and which is
4 also pivotally pinned to the hammer at the same point as the safety lever.

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6 12. The rifle of claim 11, wherein the hammer strut has two legs which are pinned together at a rear
7 extent by means of a transverse pin, and wherein a portion of the hammer strut legs straddle the
8 receiver at the mainspring housing with the transverse pin sliding within a pin slot milled into the
9 receiver.

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11 13. The rifle of claim 12, wherein the mainspring includes a mainspring guide and wherein the pin
12 slot is engaged within a mating opening provided on the mainspring guide, this engagement providing
13 the necessary pivoting action between the mainspring guide and the hammer to allow the hammer to
14 travel up and down within the breechblock.

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16 14. The rifle of claim 13, wherein the trigger of the action is pivotally pinned in a region milled in
17 a lower rear portion of the breechblock, the trigger having a sear surface located at an upper extent
18 which contacts a corresponding sear surface milled into an extension on the rear of the hammer.

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20 15. The rifle of claim 14, wherein a roller having an exposed roller surface is carried on either side
21 of the hammer and wherein corresponding cam surfaces are provided on the operating lever which
22 together with the exposed roller surfaces comprise load bearing thrust surfaces, contact between the
23 rollers and cam surfaces as the operating lever nears the closing position serving to bias the
24 breechblock rearwardly, thereby reducing excessive clearance or misalignment between the
25 breechblock and receiver at the point of the load bearing thrust surfaces.

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27 16. The rifle of claim 15, wherein the action further comprising a safety lever which is pinned to the
28 hammer in a midregion thereof, the safety lever having a pair of leg extensions which protrude
29 forwardly in order to contact a corresponding surface machined into the breechblock at a point below

1 the firing pin, movement of the hammer to a cocked position causing the safety lever leg extensions
2 to contact the breechblock and pivot the hammer rearwardly, thereby separating the trigger sear and
3 hammer sear and blocking forward movement of the hammer.

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5 17. The rifle of claim 16, wherein the safety lever has a thumb spur at an upper extent thereof, the
6 thumb spur being shrouded by sidewalls of the receiver.

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8 18. The rifle of claim 17, wherein backward movement of the safety causes the safety lever leg
9 extensions to cam out of the breechblock and place the rifle in a ready to fire condition and wherein
10 the safety lever is held in the resulting rearward position by means of a pair of spring loaded detents
11 permanently mounted in the hammer.

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13 19. The rifle of claim 18, wherein the firing pin is carried by the breechblock and has a front tip which
14 is aligned with the cartridge located in the receiver chamber when the breechblock is in the firing
15 position, the firing pin having a normally exposed rear surface which is acted upon by the striking
16 surface of the hammer when the trigger is pulled, the safety lever serving to block outside access to
17 the exposed rear surface of the firing pin when in a safety position.

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19 20. The rifle of claim 19, wherein the firing pin is spring biased to normally expose the rear surface
20 thereof from the breechblock.

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22 21. The rifle of claim 20, wherein the safety lever is prevented from being placed in the safety
23 position when the hammer is in the fired position.